

## MEETING MINUTES

Meeting time: 11/14/2020 8:30 - 10:00pm

1. Attendance: Yixiao Liu, Pengqing Wang, Fangwen Cheng, Bill Dai
2. Meeting Objectives:
  - a. Introduce each group member to each other
  - b. Reach agreement on strategic directions of the project
  - c. Start on the Project Goal and Team Contract
3. Assessment of progress:
  - a. Finish up the team contract
  - b. Start working on the draft of the project goal: came up with a general workflow
4. Decisions made:
  - a. Decided the project goal - Open flight
  - b. Decided the dataset - Routes.dat, airports.dat
  - c. Decided the traversal algorithm - BFS
  - d. Decided the covered algorithm - Dijkstra's algorithm
  - e. Decided the uncovered algorithm - Landmark Path
5. At the end of the meeting, we decided that each member would take a deeper look at the specific project we chose and understand what we should do in general, so we can start discussion on details in our next meeting
6. Our next meeting should happen on Sunday, November 29th

Meeting time: 11/29/2020 8:30-9:30 pm

1. Attendance: Yixiao Liu, Pengqing Wang, Fangwen Cheng, Bill Dai
2. Meeting Objectives:
  - a. Divide work between team members
  - b. Decide the timeline of work
  - c. Decide details about test case, makefile, graph building
3. Assessment of progress:
  - a. Decided parts of work for different team members
  - b. Decided the general workflow and timeline
4. Decisions made:
  - a. Bill, Fangwen will work on reading the data from the file, creating a graph correspondingly based on lab\_ml, and working on the BFS algorithm
  - b. Yixiao, Pengqing will work on the Dijkstra algorithm and the landmark path algorithm
  - c. We will create GitHub branches for each functional part.
  - d. We will use the makefile given on Github as a template
  - e. General workflow:
    - i. First, start writing functions reading data into a graph structure provided by lab\_ml
    - ii. Then, we will write path algorithms (BFS, Landmark Path, Dijkstra's Algorithm).
    - iii. We will then write implementation together and decide the functions of the algorithms.
5. At the end of the meeting, we summarized and confirmed again on each member's task and decided on our next meeting time. In summary, Bill and Fangwen will work on the data processing section; Yixiao and Pengqing will work on the algorithm section.
6. Our next meeting should happen on Tuesday, December 1st

Meeting time: 12/1/2020 9:00-10:30 pm

1. Attendance: Yixiao Liu, Pengqing Wang, Fangwen Cheng, Bill Dai
2. Meeting Objectives:
  - a. Summarize what we have finished till now
  - b. Discuss problems and questions we encountered during development
  - c. Try to find solutions to these problems together
  - d. Discuss what we should present in the mid-project check in meeting
3. Assessment of progress:
  - a. We finished reading the data into a graph using lab\_ml.
  - b. We demonstrated what we have accomplished so far after the previous meeting.  
At this point, we can read the raw data into a graph with a weight to be the distance between two airports.
  - c. We understood the Dijkstra algorithm and the details needed to implement it(i.e. The usage of priority queue from STL)
4. Decisions made:
  - a. We decided to merge the branch created for creating the graph
  - b. Yixiao and Pengqing will continue working on the Dijkstra algorithm
5. Our next meeting should happen on Thursday, Dec. 3th 5 pm.

Meeting time: 12/3/2020 17:00-17:15 pm

1. Attendance: Yixiao Liu, Pengqing Wang, Fangwen Cheng, Bill Dai, Zhaorui Ding
2. Meeting Objectives:
  - a. Check for the status of each assigned part
  - b. Check if we are on the right track
  - c. Figure out the workflow for the rest of the project
3. Assessment of progress:
  - a. We finished the structure of the Dijkstra algorithm
  - b. We demonstrate what we have at the current stage
  - c. We confirmed that our goals make sense and are achievable
4. Decisions made:
  - a. We decided to use BFS to get the number of times needed to reach the destination
5. Our next meeting should happen on Sunday, Dec. 6th 11 am.

Meeting time: 12/6/2020 11 am - 11:30 am

1. Attendance: Yixiao Liu, Pengqing Wang, Fangwen Cheng, Bill Dai
2. Meeting Objectives:
  - a. Check for the current status
  - b. Decide the best algorithm and goal for the complex algorithm
3. Assessment of progress:
  - a. We have done implementing the Dijkstra algorithm
  - b. We started doing research on the potential complex algorithms
4. Decisions made:
  - a. We decided to change the complex algorithm to A\* algorithm, and the goal is to find the shortest path between two airports given some "forbidden" airports that we don't want to visit
  - b. Yixiao and Pengqing will work on the A\* algorithm, while Bill and Fangwen will work on the BFS.
5. Our next meeting should happen on Thursday, Dec. 10th 3 pm.

Meeting time: 12/10/2020 3pm - 3:20 am

1. Attendance: Yixiao Liu, Pengqing Wang, Fangwen Cheng, Bill Dai
2. Meeting Objectives:
  - a. Check for the current status
  - b. Decide the best algorithm and goal for the complex algorithm
3. Assessment of progress:
  - a. We have done implementing A\* search algorithm
4. Decisions made:
  - a. We will meet again on Dec. 11th to do the presentation on Zoom.
  - b. Fangwen and Bill will work on the test case and BFS.
  - c. Yixiao and Pengqing will begin on making a Powerpoint or Google Slide for the final presentation
5. Our next meeting should happen on Friday, Dec. 11th 8 pm.